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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/561,796	12/21/2005	Serge Jean Henri Bettonville	4702-38	5863
23117 7590 01/06/2009 NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203				
EXAMINER				
WOOD, ELLEN S				
ART UNIT		PAPER NUMBER		
1794				
MAIL DATE		DELIVERY MODE		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/561,796

Applicant(s)

BETTONVILLE ET AL.

Examiner

ELLEN S. WOOD

Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 12 and 13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-10, 12 and 13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-10 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duprie et al. (EP1201711, hereinafter "Duprie") in view of Funkai et al. (US 2004/0191440, hereinafter "Funkai").

In regards to claims 1-3 and 12, Duprie discloses pipes which are referred to as "PE 80" and "PE 100" [0009]. These are polyethylene resins which when formed into pipes of specific dimensions, survive a long term pressure test at different temperatures for a period of 5,000 hours. According to the applicant a pressure pipe is a pipe having a pressure rating of PE 80 and above (pg. 1 lines 22-23). Thus, the pipes of Duprie are considered pressure pipes. The polyethylene pipe resin has a bimodal molecular weight distribution [0016]. The polyethylene resin comprises 35 to 49 wt% of a first polyethylene fraction of high molecular weight having a density of up to 0.930 g/cm³ and from 51 to 65 wt% of a second polyethylene fraction of low molecular weight having a density of greater than 0.946 g/cm³ [0013].

In regards to claim 8, Duprie discloses the 35 to 49 wt% of the first polyethylene fraction comprising a linear low density polyethylene having a density of up to 0.930 g/cm³, and an HLMI of less than 0.6 g/10 min and 51 to 65 wt% of the second

polyethylene fraction comprising a high density polyethylene having a density of at least 0.969 g/cm^3 [0013] with a MI_2 from 100 to 1000 g/10 min [0026]. The polyethylene resin having a density of greater than 0.946 g/cm^3 and an HLMI of from 1 to 100 g/10 min [0013].

In regards to claim 9, Duprie discloses forming pipes of the resin material to form "PE 100" pipes [0041].

In regards to claim 10, Duprie discloses the pipes extrapolation shows that they have a $20^\circ\text{C}/50$ years resistance of at least 8 and 10 MPa, respectively [0009 and 0041]. This classification is described in ISO 9080 and ISO 12162 [0009 and 0041].

Duprie is silent with regards to the use of an ionomer in the polyethylene pipe resin.

Duprie discloses that the polyethylene resins according to the invention can be prepared by any method suitable [0045]. The resins are most often blended with additives [0044].

Funkai discloses that an ionomer polymer is used as an impact-reducing material in piping to improve the impact resistance [0080-0081].

It would be obvious to one of ordinary skill in the art to combine the polyethylene pipe resin of Duprie with the ionomer polymer of Funkai to produce a pipe that has increased impact resistance while maintaining the standards of pressure pipes.

Response to Arguments

3. Applicant's arguments filed 09/24/2008 have been fully considered but they are not persuasive.
4. The applicant argues that ionomer used in the pipe of Funkai would have not been obvious to use in the pressure pipes of Dupire.

When a work is available in one field, design incentives and other market forces can prompt variations of it, either in the same field or in another. *KSR* at 1396. If a person of ordinary skill in the art can implement a predictable variation, and would see the benefit of doing so, § 103 likely bars its patentability. *Id.* Moreover, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond that person's skill. *Id.*

One of ordinary skill in the art at the time the invention was made, when viewing the state of the art and the predictable improvements in structures known in the art, would be motivated to improve the pressure pipes, of the prior art, with the processes and structure taught by Funkai, since the improvements of improved low temperature impact and mechanical properties were known to one of ordinary skill in the art and it would have predictably improved similar articles in the same way.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ELLEN S. WOOD whose telephone number is (571)270-3450. The examiner can normally be reached on M-F 730-5 with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on (571)272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. Lawrence Tarazano/
Supervisory Patent Examiner, Art Unit 1794